

**TITLE: ON-CHIP IMAGE BUFFER COMPRESSION METHOD AND
APPARATUS FOR DIGITAL IMAGE COMPRESSION**

BACKGROUND OF THE INVENTION

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Field of Invention

The present invention relates to digital image compression, and, more specifically to the on-chip temporary image buffer compression resulting in significant reduction of storage density requirement.

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Description of Related Art

Digital image and motion video have been adopted in an increasing number of applications, which include digital camera, scanner/printer/fax machine, video telephony, videoconferencing, surveillance system, VCD (Video CD), DVD, and digital TV. In the past almost two decades, ISO and ITU have separately or jointly developed and defined some digital video compression standards including JPEG, JBIG, MPEG-1, MPEG-2, MPEG-4, MPEG-7, H.261, H.263 and H.264. The success of development of the still image and video compression standards fuels the wide applications. The advantage of image and video compression techniques significantly saves the storage space and transmission time without sacrificing much of the image quality.

Fig.1 illustrates the basic structure of frame pixels. A frame 11 is composed of a certain amount of blocks 12, and each block 12 is composed of a certain amount of pixels 13.